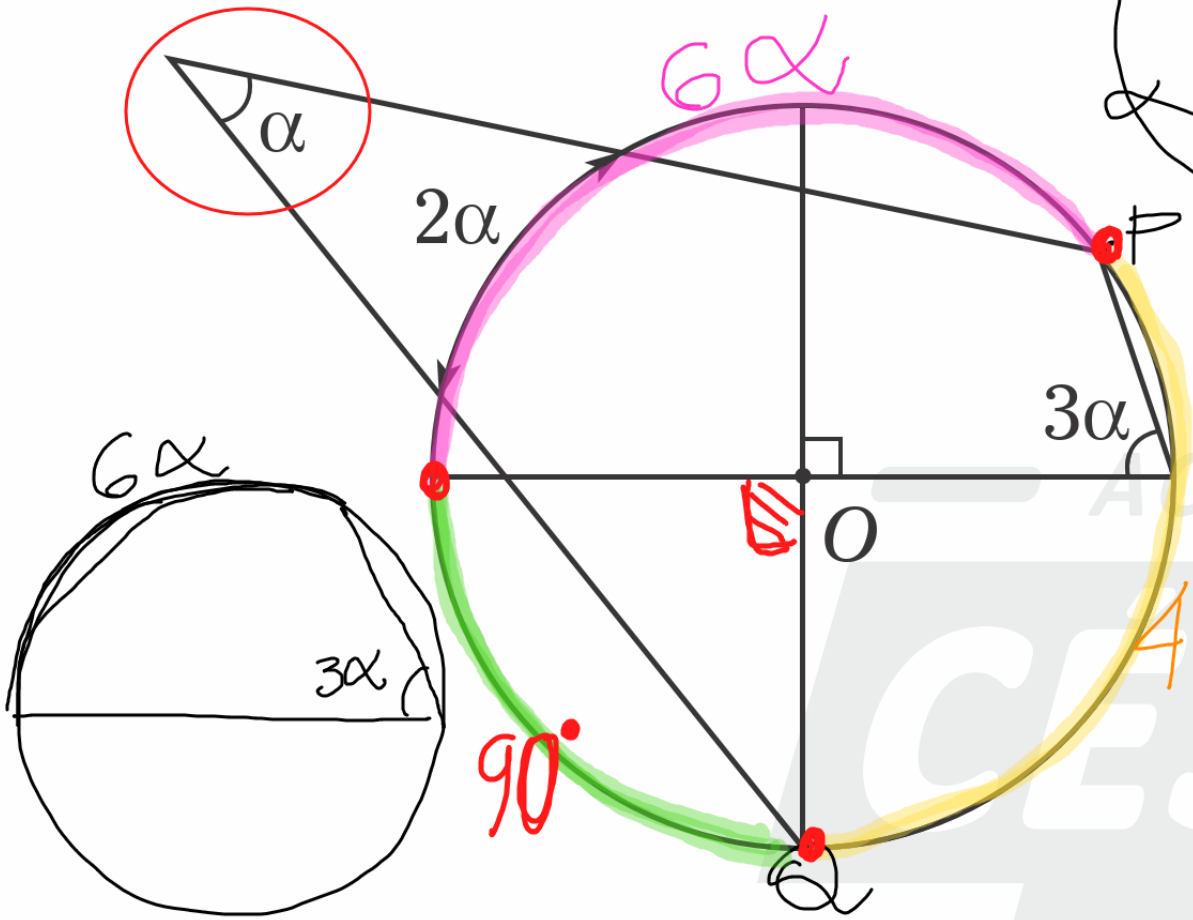
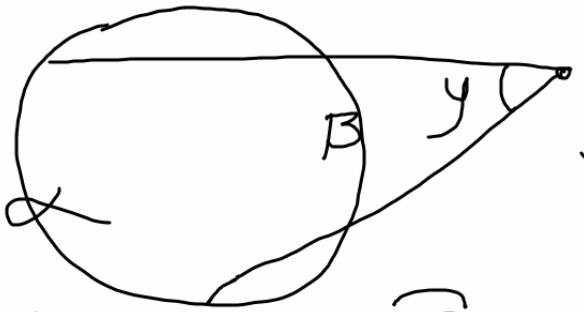




$$\gamma = \frac{\alpha - \beta}{2}$$

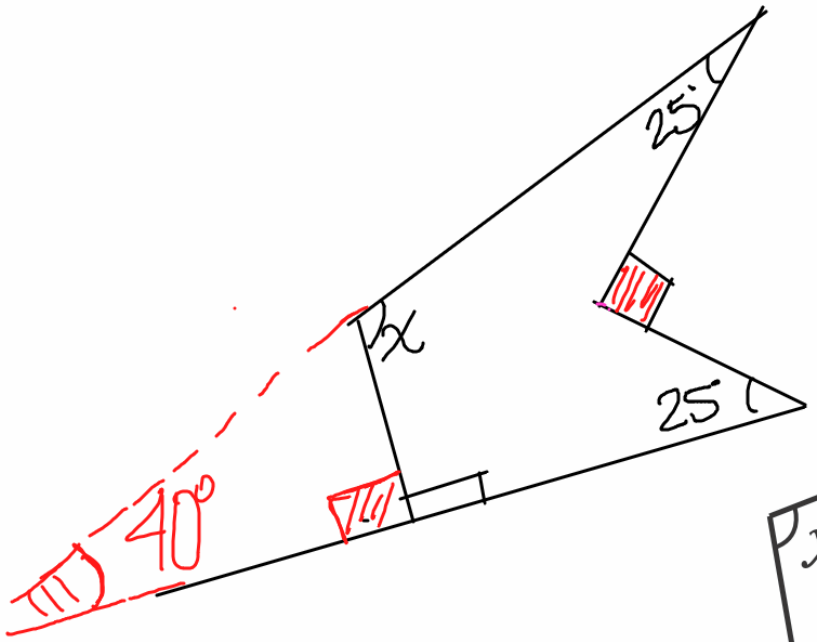
$$\alpha = \frac{m\overset{\frown}{PQ} - 2\alpha}{2}$$

$$2\alpha = m\overset{\frown}{PQ} - 2\alpha$$

$$\boxed{4\alpha = m\overset{\frown}{PQ}}$$

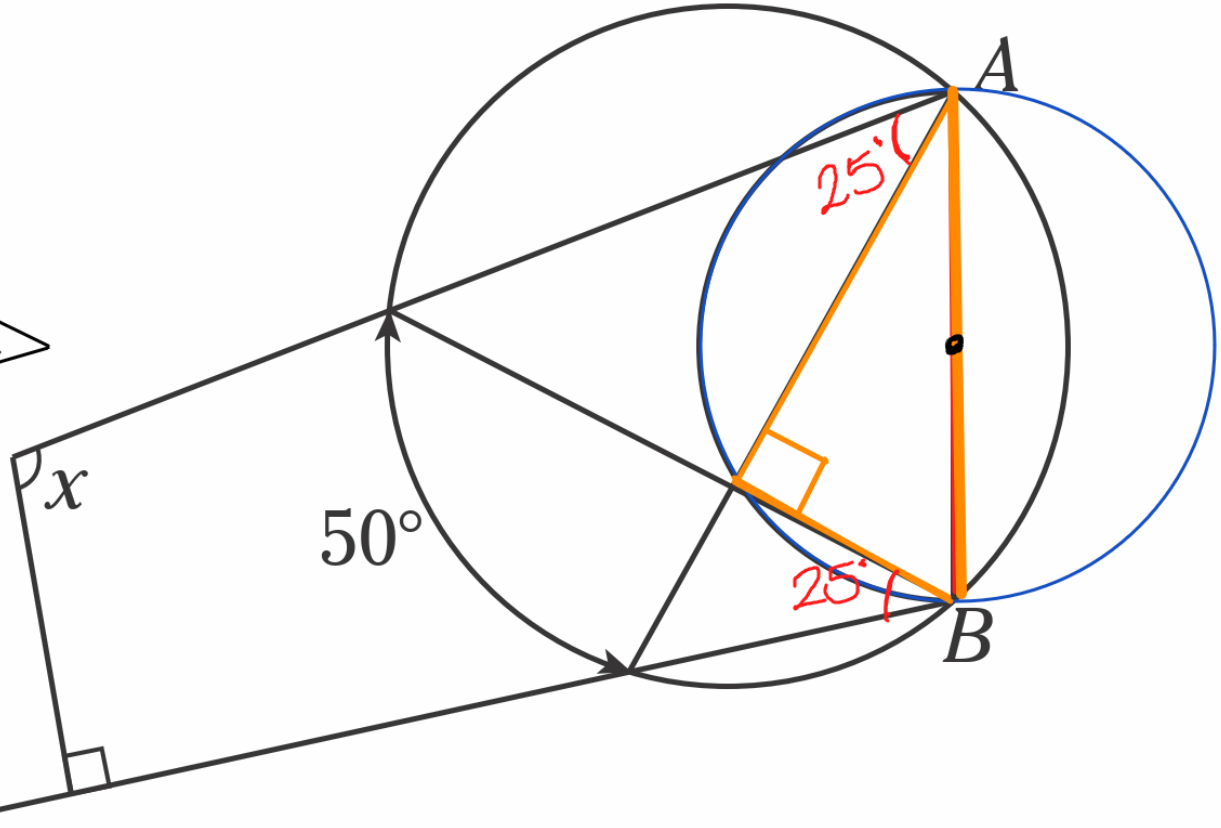
$$4\alpha + 6\alpha + 90^\circ = 360^\circ$$

$$\alpha = 27^\circ$$

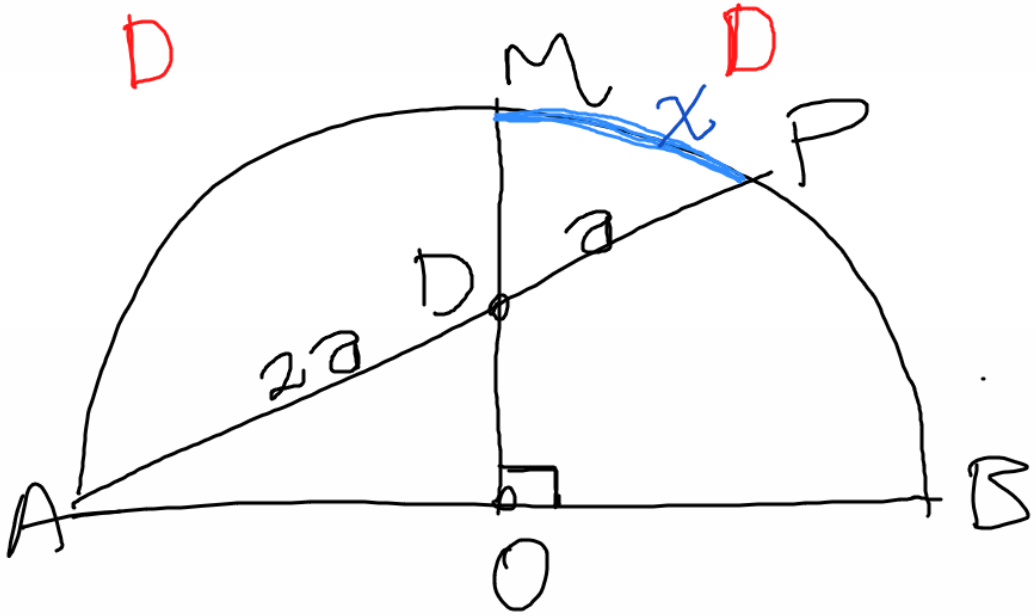


$x = 90° + 40°$

$x = 130°$



5. En una circunferencia de diámetro AB y centro O, el radio OM interseca a la cuerda AP en el punto B. Si $\overline{OP} \perp \overline{AB}$ y $AD = 2(BP)$, calcule $m\widehat{MP}$.



1

P.3

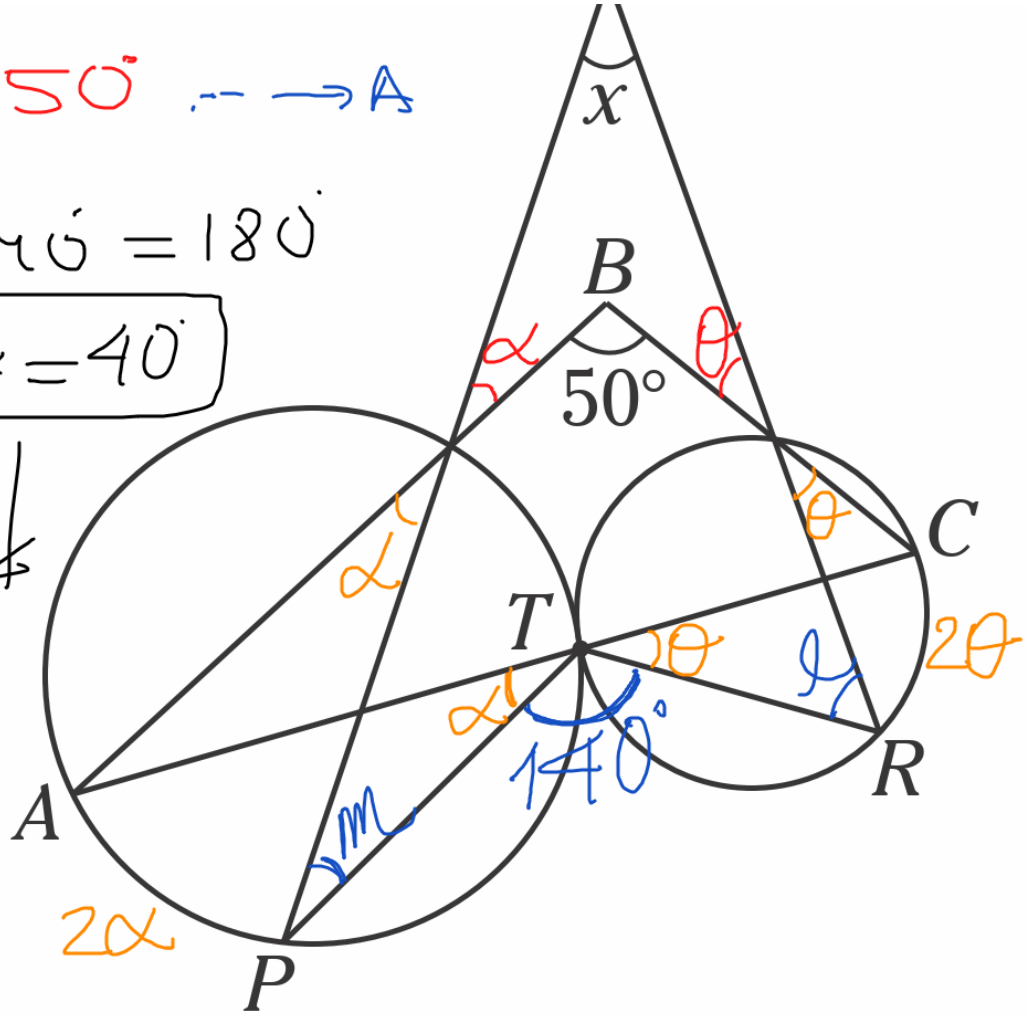
$x+\alpha+\theta=50^\circ$ ---→ A

Pero: $\theta+\alpha+140^\circ=180^\circ$

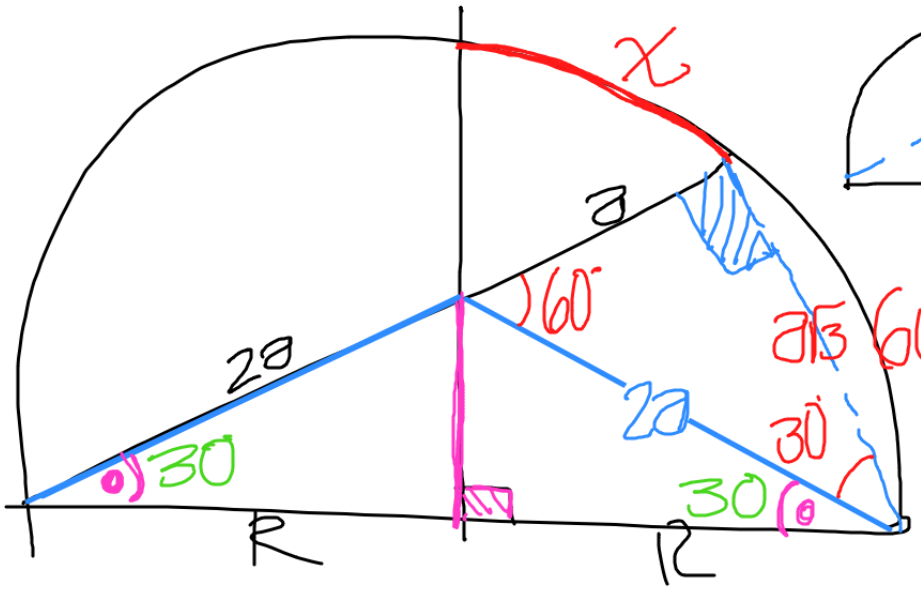
$\boxed{\theta+\alpha=40^\circ}$

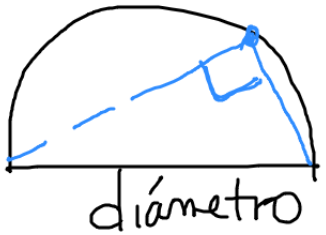
$\therefore x=10^\circ$

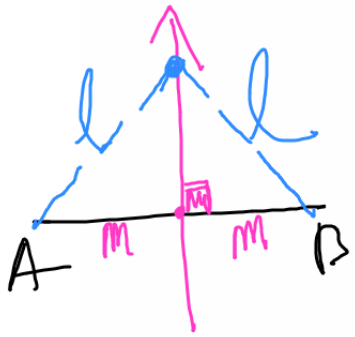
$x+m+\ell=140^\circ$ ---→ B



5.



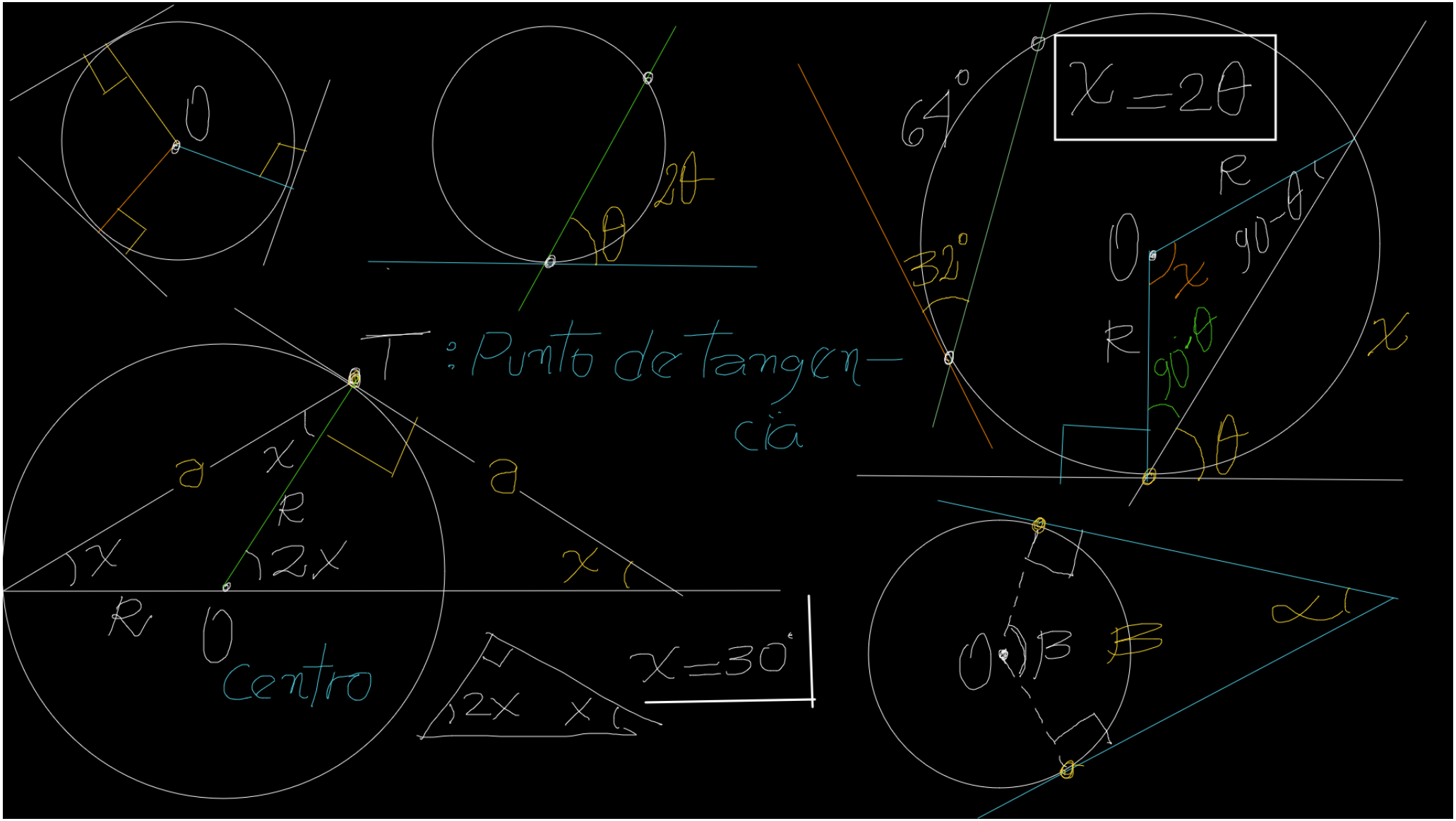




$x+60^\circ=90^\circ$

$x=30^\circ$

5. En una circunferencia de diámetro AB y centro O, el radio OM interseca a la cuerda AP en el punto B. Si $\overline{OP} \perp \overline{AB}$ y $AD=2(BP)$, calcule $m\widehat{MP}$.



O
2θ
θ
T : Punto de tangencia
a
x
R
2x
x
R
O
Centro
2x
x
x = 30°
64°
32°
x = 2θ
R
O
x
90-θ
R
90-θ
x
θ
O
β
β
α

EN LA EXIGENCIA

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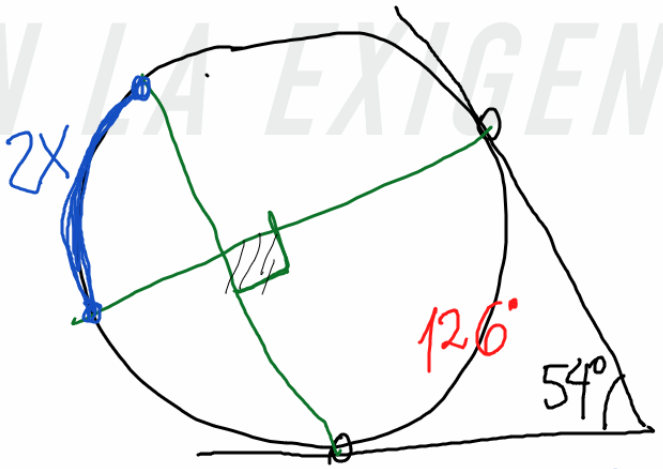
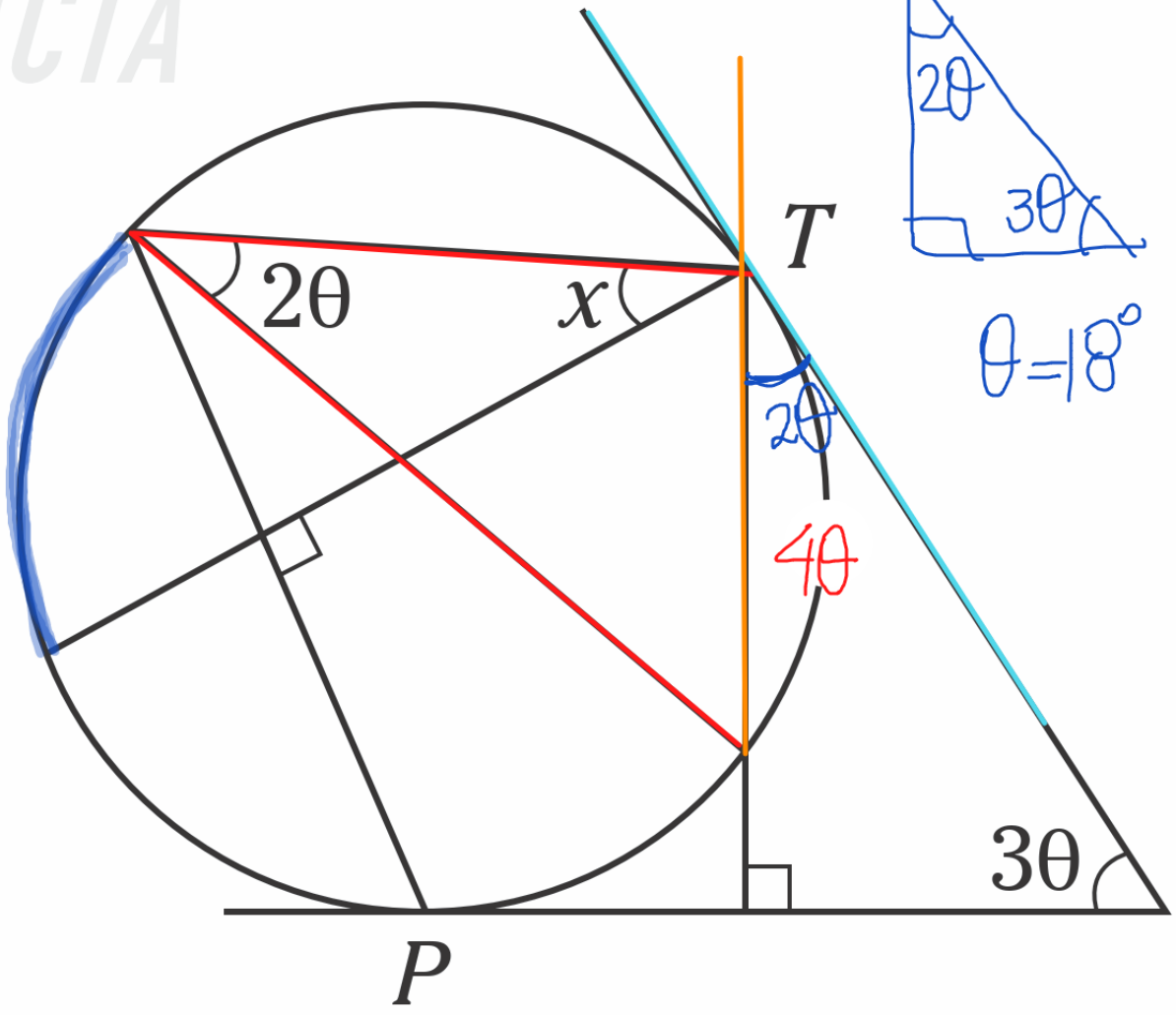
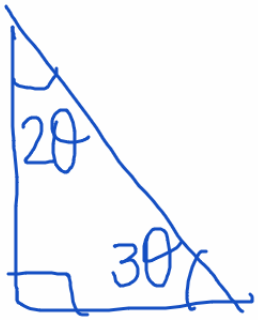


$$90^\circ = \frac{126^\circ + 2x}{2}$$

$$x = 27^\circ$$





$\theta = 18^\circ$